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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,070	03/29/2004	Gustaaf Willem Van Der Feltz	1857.2780000	8087

26111 7590 10/28/2005

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WASHINGTON, DC 20005

EXAMINER
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KIM, PETER B

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/811,070

Applicant(s)

VAN DER FELTZ ET AL.

Examiner

Peter B. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 102005, 12005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 10, 12, 20 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The written description does not seem to disclose the adjusting system comprising image correction system that adjusts a cross-sectional shape of the beam to adjust a shape of the target portion and a beam magnification adjustment system that adjusts a size of the target portion.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9, 13-16, 19, and 23-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto (GB 2321316).

Hashimoto discloses a lithographic apparatus comprising an illumination system (22), a patterning system (13), a substrate support (8), a projection system (12), a temperature measuring

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system (2), a calculating system (11), an adjusting system that adjusts the spatial characteristics of the target portion relative to the substrate support to compensate for the calculated dimensional response (p. 16-19). Hashimoto discloses temperature measure system comprising at least one sensor that measure the temperature of the substrate at each of plurality of regions across the surface, sensors distributed across the support and sensing the temperature of an adjacent region of the substrate (Fig. 1, ref. 2). Hashimoto also discloses temperature mapping system (Fig. 2).

Hashimoto discloses device manufacturing method and the method of establishing a model comprising emitting projection beam, imparting to the beam a pattern, supporting a substrate, projection the pattern to target portion of the substrate (p. 12, lines 13, 14 and p. 16, lines 13-17), measuring temperature of the substrate, calculating a dimensional response and adjusting the spatial characteristics, and deriving a model of the dimensional response (p. 16, line 24 - p. 19, line 5).

Claims 1, 11, 13, 19, 21, and 23-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Chilese et al. (Chilese) (6,424,879).

Chilese discloses a lithographic apparatus comprising an illumination system, a patterning system, a substrate support, a projection system (col. 1, lines 20-34), a temperature measuring system (col. 4, lines 53-65), a calculating system (col. 5, lines 42-64)), an adjusting system that adjusts the spatial characteristics of the target portion relative to the substrate support to compensate for the calculated dimensional response (col. 4, line 25 – col. 5, line 64). Chilese

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discloses adjusting spatial characteristic by adjusting the position of the target portion (col. 6, lines 4-24).

Chilese discloses device manufacturing method and the method of establishing a model comprising emitting projection beam, imparting to the beam a pattern, supporting a substrate, projection the pattern to target portion of the substrate (col. 1, lines 20-34), measuring temperature of the substrate, calculating a dimensional response and adjusting the spatial characteristics, and deriving a model of the dimensional response (col. 4, line 25 – col. 5, line 64).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Feder et al. (Feder) (2004/0012404).

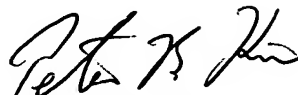
Hashimoto discloses the claimed invention as discussed above; however, Hashimoto does not disclose the temperature sensor located above the substrate. Feder discloses in para 0032, the temperature sensor located above the substrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the temperature sensor above the substrate in the invention of Hashimoto in order to accurately measure the temperature of the substrate.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter B. Kim  
Primary Examiner  
Art Unit 2851

October 26, 2005